

REMARKS

In response to the Office Action dated July 26, 2004, the applicants respectfully submit their response, including cancellation of claims 6, 7, and 10, amendment of claims 1, 2, 8, 9 and 12, and presentation of new claims 16-21. In the office action dated July 26, 2004, the examiner substantively allowed Claim 11. In making the within amendments to the claims asserting the following remarks, the applicants have amended the remaining claims to distinguish them from the prior art, and asserts that all remaining claims 1-5, 8, 9, and 11-21, are now allowable and respectfully requests favorable reconsideration and an early notice to that effect.

Addressing first the rejection of claim 1 based upon the Detsch reference, the applicants have amended claim 1 to include the limitation that the claimed air and water valve means comprise field replaceable pushbutton valves. This is a critical distinguishing feature because the pushbutton valves are moving parts and, as such, will require periodic maintenance or replacement. The applicants' invention is a maintainable device allowing users to make valve changes in the office without sending the device out for maintenance.

The 102 rejection of claim 2 based upon Detsch should also be withdrawn insofar as claim 2 provides the further limitation that the replaceable pushbutton valves are fitted with autoclavable O-rings. New technology that recognizes the sterilization benefits of the autoclave process (i.e. heat, pressure and time sterilization) has been almost universally adopted. The process is problematic, however, for instruments with conventional O-rings or gaskets, which cannot withstand the process. The present inventors, however, contemplated the need to make the entire unit autoclavable, including the O-rings sealing the replaceable pushbutton valves, and

are specifying in claim 2 that those O-rings be made of material that can withstand the autoclave process. The prior art, particularly the Detsch reference, predates the widespread use of autoclave sterilization. The prior art should not, therefore, be interpreted and applied to include autoclavable sealing provisions. As a result, the applicants reassert that claim 2 should be allowed.

Claims 3 and 4 are not amended but depend from Claim 2 so, for the foregoing reasons, the applicants assert they, too, are allowable, and respectfully request withdrawal of the 102 rejections.

To overcome the 102 rejection, Claim 5 has been amended to include means for aligning the reflective surface with the pushbutton valves. Alignment is critical and must be repeatable and reliable, so that, when the dentist/user has his thumb positioned on the pushbutton valves, he has the proper view of the mirror and does not need to turn the handle. There is no teaching or suggestion in any of the cited references providing for such alignment. As such, the applicants assert that the rejections of claim 5 should be withdrawn.

Claim 8 has been amended to distinctly claim a means for aligning the air and water jets with the mirror. This alignment, also, is critical, insofar as the air and water must be directed at the mirror to be effective. While the cited references make numerous references to directing air and water at the mirror, none of them recognize the necessity, or offer a solution, to the problem of removing and/or replacing the mirror and insuring that it lines up properly.

The applicant has also amended claim 9 to point out and distinctly claim a locking means applicable to the mirror shank, positioned with the handle sleeve, which prevents longitudinal translation within the sleeve. While it is important that the mirror be removable and replaceable, as set forth in the preceding claims, its rigidity, orientation and locking of it relative to the handle

is critical because the dentist/user often uses the mirror to exert force, to retract a patient's tongue or cheek, etc. The locking means set forth in claim 9 allows this without any danger or fear of the mirror slipping within the sleeve and becoming misaligned with the air and water jets. There is no recognition of the problem of the mirror slipping, or the use of it to exert force, in any of the prior art, including the Detsch reference, and the applicants respectfully assert that, as a result, the rejection of claim 9 should be withdrawn.

The applicants appreciate the substantive allowance by the examiner of claim 11. In light of the amendments and remarks, though, the applicants respectfully request reconsideration of the remaining claims rather than writing claim 11 in independent form.

Claim 12, as amended, provides that the communicating means for water extends the length of the handle so that water is dispersed at the end, outside of the handle, and not in a chamber near the end of the handle, as disclosed in the Detsch reference (see water tube 70 in Figure 4). This difference is important because mixing within a chamber in the handle, as set forth in the Detsch reference, results in sporadic bursts of water being expelled when both air and water are selected because there is no regulation of the air/water mixture as it is expelled from the instrument as in the present invention. The water will be "choked" out similarly to a showerhead. If only water is selected in the Detsch arrangement, it will first have to flood the chamber before being expelled. If only air is selected in the Detsch reference, the high pressure air will initially expel any water remaining in the chamber. In both instances, the "mixing" chamber of the Detsch reference results in a delay of the delivery of whatever is desired, air or water. In claim 12, the present invention is advantageous in that the water is delivered at the end of the handle; there is no air pressure "blowback" that keeps water from being expelled, nor is there the initial expulsion of water residue when air is called for. For the foregoing reasons, the

applicants assert that the rejection of claim 12 should be withdrawn, and respectfully requests reconsideration.

The 102 rejection of claims 13-15, insofar as they depend from claim 1 discussed supra, should also be withdrawn and reconsideration is respectfully requested.

As the Examiner is well aware, the standard for lack of novelty or "anticipation" under 35 USC 102 is one of strict identity. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). As stated in Hybritech, Inc. v. Monoclonal Antibodies, Inc., 231 USPQ 81, 90 (Fed Cir. 1986) cert. den. 480 U.S. 97, "it is axiomatic that for prior art to anticipate under Section 102 it has to meet every element of the claimed invention..." In In re Donohue, 226 USPQ 619, 621 (Fed. Cir. 1985), it was stated that "an anticipation rejection requires a showing that each limitation of the claim must be found in a single reference, practice or device". As further stated in Atlas Powder Co., C.E.I. du Pont de Nemours & Co., 224 USPQ 409, 411 (Fed. Cir. 1984), the "exclusion of a claimed element from a prior art reference is enough to negate anticipation by that reference." The applicant respectfully submits that the failure of the cited references to disclose the recited structure mandates that the 102 rejections are not warranted under this standard and must be withdrawn.

Claims 1-4 and 13 also presently stand rejected under 35 USC 103 based upon Vellender in view of Detsch. The Vellender reference, however, fails to provide the elements of field

replaceable pushbutton valves as set forth in amended claim 1. The Vellender reference does not even have on-board valves, but instead relies upon a pneumatic signal to operate a remote pneumatic valve 6. In addition, there is no teaching or suggestion in the Vellender reference to construct the instrument from autoclavable materials, as claimed in claim 2. Dependent claims 3 and 4 are allowable over Vellender and Detsch for the same reasons.

The Vellender reference further fails to show linearly offset valves, as set forth in claim 13. The operator control in the Vellender reference comprises a linear air tube 15 (Figure 2), and thus fails to provide the teaching necessary to support a rejection under 35 USC 103.

Claims 5-10 stand rejected under 35 USC 103 over Vellender, Detsch and Whitman. Of those, claims 6, 7 and 10 have been withdrawn by the applicant. None of those three references, however, disclose a means for aligning the mirror with the on-board valves, as set forth in claim 5. It is critical that the mirror line up with the pushbutton valves so that the user can hold the instrument in the proper orientation, while positioning his thumb/finger on the valves to operate them in such a manner that the orientation is the same for every use. Similarly, claim 8 provides for alignment means between the mirror and the air/water orifices. None of the three cited references provide any structure for aligning the mirror with the valve pushbuttons or the air/water jets. The Whitman reference and Detsch reference provide mirrors with threaded shanks that, if screwed in to the perfect depth, line up with the pushbutton valves and water/air orifices.

The Whitman and Detsch references are disadvantageous as far as alignment of the mirror is concerned, in that they can be overtightened or undertightened, which result in the reflective surface not lining up with the valve pushbuttons or air/water orifices. In addition, the tightening down of the locking nut 22 of Whitman or the shank into the sleeve of Detsch are the only things

to prevent rotational translation of the shank. In the present invention, particularly as claimed in claim 18, a geometrically shaped shank in a geometrically shaped sleeve reliably prevents rotational translation. This is important for many reasons, including the need for the operator to place a static load on the mirror head. With the present invention, a user may confidently do so without fearing that the mirror shank will rotate or disconnect within the sleeve, unlike the threaded shanks disclosed in Detsch and Whitman.

Furthermore, claim 9 sets forth a means for locking the shank position longitudinally thereby preventing sliding of the shank within the sleeve. In none of the cited references is there any equivalent structure to the recess 86 and locking means 88 of claim 9.

With respect to all of the 103 rejections, the applicant asserts that the rejections have failed to meet the standard necessary to support the rejections, even if the prior art references disclosing the cooperating all of the elements of the applicant's invention, unless the teaching or suggestion to make the claimed combination and the reasonable expectation of success are both found in the prior art. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The lack of any teaching of the combination mandates withdrawal of the obviousness rejections. In re Wood, 599 F.2d 1032, 202 USPQ 171, 174 (C.C.P.A. 1979). An invention is not rendered obvious merely because two or more references exist that include the elements of the claimed invention; there must be some teaching suggestion or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 2d

1276, 1278 (Fed. Cir. 1987). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). A statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

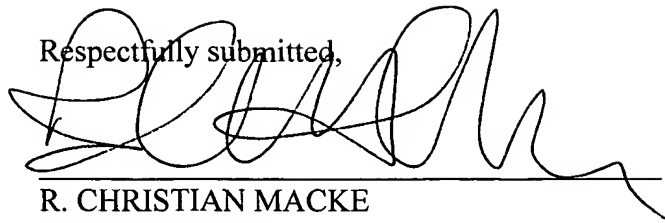
Finally, the applicants have added claims 16-21 to more particularly point out and distinctly claim structure of the present invention summarized as follows:

- 16: removable valve body section;
- 17: retaining pins on pushbutton valves;
- 18: geometrical mirror shank received in geometric sleeve;
- 19: water jets surrounded by air jets;
- 20: locking means preventing rotational translation;
- 21: locking means holding mirror desired distance from air and water jets.

In light of all of the foregoing amendments and remarks, the applicant asserts that all remaining claims 1-5, 8, 9 and 11-21 of the present application are now in a condition for allowance and respectfully requests reconsideration and an early notice to that effect.



Respectfully submitted,



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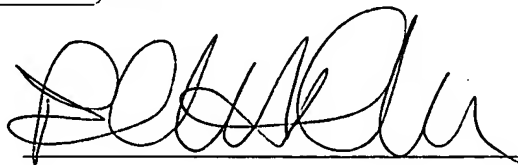
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I hereby certify that this correspondence is being faxed to Examiner Todd E. Manahan at 1-703-872-9306 and deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 25 th day of October, 2004.

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DATE



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